Paolo Avogadro

Born: Como, Italy. 21st March 1975
Citizenship: Italian

Home Address

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when	where	appointment	what
1/5/**2015** – present	**Italy**, UNIMIB	**Computer Science**	• Anomaly detection • Parallel Computing • Machine Learning • KPI • Statistical Analysis • Social Network Analysis • LMS
2/9/**2013 –** 30/4/2015 (20 months)	**Italy**, Self-employed	**Teaching, updating**	Physics, Calculus I + II, Statistics
3/1/**2012 –** 1/9/2013 (18 months)	**USA**, TAMU	**Physics**	Calculations of Giant Resonances in the QRPA framework.
2/1/**2011 –** 1/2/2012 (12 months)	**Italy**, UNIMI	**Physics**	The effect of a reduced pairing interaction on vortices in the inner crust of Neutron stars.
1/6/**2008** – 1/1/2011 (30 months)	**Japan**, RIKEN	**Physics**	Development of the Finite Amplitude Method for the QRPA and writing a fully self consistent QRPA code.
2007 - 2008 (6 months)	**Italy**, UNIMI	**Physics**	First microscopic study of vortex nucleus interaction in the inner crust of neutron stars.

Education

Ph.D., Nuclear Astrophysics, Università degli Studi di Milano, Milan, Italy. 2007
Thesis: *Quantum calculations of Vortices in the inner crust of neutron stars,*
Advisor: Ricardo A. Broglia

M.Sc., Theoretical Physics, Università dell'Insubria, Como, Italy. 2003
Thesis: *Stochastic perturbations of dynamical system on a lattice*
grade: 110/110, Advisor: Giorgio Mantica

Schools & Courses:

"Software Developer Workshop - Technical Computing & Artificial Intelligence" Milano, 25-26 Ottobre 2017.

"Understanding Bayesian Networks with examples in R", M.Scutari, Universita' Cattolica, Milano, 21-23 January 2017 -"12TH Advanced School on Parallel Computing"

Bologna-CINECA February, 15th – 19th 2016
"Tools and techniques for massive data analysis" Milano (CINECA-Segrate), Italy , October 14-15-16, 2015

"Parallel Calculations on Grid and CSN4 Cluster" (Secondo corso di formazione "Calcolo Parallelo su Grid e CSN4 cluster). Parma, Italy, 26-28 Sept. 2011

"6th Nordic Summer School: Nuclear Physics" Hillerød, Denmark, 8 - 19 August 2005

"Quantum Chaos: Theory and Applications", Villa Olmo, Como, June 17-22, 2003

"Physics of Black Holes" Villa Olmo, Como, April 20-24, 1998

Languages

		USA - Japan	EURO
English	very fluent	ILR level 4	C1
Italian	native	ILR level 5	C2
Spanish	conversational	ILR level 3	B1
Japanese	beginner/average	JLPT 3 (2010)	A2
French	beginner/average	ILR level 2	A2

Teaching and presentations:

I am the assistant professor for the "Sistemi di Calcolo Parallelo (Parallel Calculation)" course (from 2015/2016 - present) at the department of computer science (DISCo) at Università Bicocca, focusing on exercises and theory on MPI, OpenMP, CUDA and Hadoop. I co-tutor university students, usually from the Computer Science and Statistics department, for the development of their thesis (master and doctorate level). I have presented my works in many international conferences and invited talks and this has refined my ability as a speaker for both experts and undergraduate students (the papers and presentations at KMIS 2015

and E-society 2016 have obtained the best paper award). I have a long standing experience in tutoring math and physics both at high school and university level.

Technical Skills:

Problem modeling	
Bayesian inference	
Working Environments	Linux/ OSX / Windows
Virtual Machines	VirtualBox
Data analysis	time series analysis, anomaly detection,...
Statistical analysis	clustering, regressions,...
Data visualization	MatPlotLib, Gnuplot,...
Machine learning	Supervised and unsupervised
Iterative algorithms	e.g. Krylov based

Programming:

Libraries	LAPACK, BLAS, FFTW3...
Parallel computing (HPC)	MPI, OpenMP, CUDA
Distributed computing	Hadoop (via Python)

Computer Languages:
Fortran, Latex, C/C++, Python, R, Bash, SQL

Soft Skills:

I use the scientific mindset for everyday modeling and for problem solving. I naturally adapt to international environments and I enjoy collaborative teams where I can bring my contribution and learn from the other members. Remote collaborations are not a problem and I can work at both detail level and strategic goals with my colleagues. I am not afraid of mistakes, since I believe that they are normal in the process of improvement; when they happen, I consider them carefully in order to move forward as a person and as a professional. I am accustomed to making mathematical models and adapting them for computational solutions. I am experienced at submitting papers to “top of the field” international journals. I am acquainted with the interaction with reviewers, to analyze and discuss their objections, and to adapt my work to match the requirements for a clear publication. I enjoy learning about other cultures, since it opens my mind, and, when I have time, learning new languages or improving the ones I already know.

Personal Interests: Skiing, Swimming, Soccer, Reading, Rock climbing, Traveling, Learning languages.

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base art. 13 del D. Lgs. 196/2003.